IN THE DRAWINGS

Please enter the attached *Replacement Sheets* for originally-filed **Figs. 4B, 7A and 7B**.

REMARKS/ARGUMENTS

By the *Office Action* of 12 November 2008, Claims 1-31 are pending in the Application, and all rejected. Applicant thanks Examiner with appreciation for the careful consideration and examination given to the Application.

Applicant submits this *Response and Amendment* solely to facilitate prosecution. As such, Applicant reserves the right to present new or additional claims in this Application that have similar or broader scope as originally filed. Applicant also reserves the right to present additional claims in a later-filed continuation application that have similar or broader scope as originally filed. Accordingly, any amendment, argument, or claim cancellation presented during prosecution is not to be construed as abandonment or disclaimer of subject matter.

By the present *Response and Amendment*, Claim 1 is canceled, Claims 2, 5-6, 17-21, 26, 28 and 31 amended, and new Claims 32-36 presented. No new matter is believed presented, and all pending Claims believed allowable.

1. Objection to the Specification and Drawings

In the *Office Action*, the *Specification* is objected to as reference to an element does not comport to the Drawings, and the Drawings are objected to as the Examiner alleges that a certain feature is not disclosed.

Fig. 4B has been amended to delete the indication of reference numeral **15**. **Fig. 7A** has been amended, wherein reference numerals **210** and **220** have been interchanged. **Fig. 7B** has been amended to replace reference numeral **210** with **220**. Applicant respectfully submits that **Figs. 4B**, **7A** and **7B** in the *Replacement Sheets* do not add new matter to the *Application*, which fully supports the changes to the Drawings to comport with the disclosure of the *Application*. It is respectfully submitted that the changes to **Figs. 4B**, **7A** and **7B** overcome the objection to the *Specification* and Drawings.

2. Claim Rejections Under 35 USC § 112

In the *Office Action,* Claims 5, 17-20, 29 and 31 are rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention. Applicant herein amends the Claims in an effort

to remove the objectionable language, and in some instances, places the canceled recitations into dependent Claims. It is respectfully submitted that these clarifications overcomes this ground of rejection.

3. The Claim Rejections Under §§ 102/103

In the *Office Action,* Claims 1-4, 7, 10-13, 16, 21-23 and 26-30 are rejected under 35 USC § 102(b) as allegedly being anticipated by US Patent No. 3,992,932 to Venema. Claims 21 and 26 are rejected under 35 USC § 102(b) as allegedly being anticipated by GB Patent No. 2,312,193 to Searle. Claim 5 is rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view of US Patent No. 6,305,145 to Suolahti. Claim 6 is rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view of US Patent No. 4,712,425 to Augrende et al. Claims 8-9 are rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view of US Patent Publication No. 20030087713 to Todd et al. Claim 14 is rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view of US Patent No. 3,832,899 to Nicolau. Claim 15 is rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view of Nicolau and Suolahti. Claim 17 is rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema. Claim 18 is rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view of US Patent No. 5,445,036 to Hordnes et al. Claims 19-20 are rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view of Searle. Claims 22-23 and 27-30 are rejected under 35 USC § 103(a) as allegedly being unpatentable over Searle in view of Venema. Claim 24 is rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view of Suolahti. Claim 24 also is rejected under 35 USC § 103(a) as allegedly being unpatentable over Searle in view of Venema and Suolahti. Claim 25 is rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view of Augrende et al. Claim 25 also is rejected under 35 USC § 103(a) as allegedly being unpatentable over Searle in view of Venema and Augrende et al. Claim 31 is rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view of US Patent No. 4,899,599 to Eddens. Claim 31 also is rejected under 35 USC § 103(a) as allegedly being unpatentable over Searle in view of Venema and Eddens. Applicant respectfully traverses these grounds of rejection in view of the below.

Claim 1 is herein canceled, and Claim 2 rewritten into independent form. Claim 18 is similarly rewritten. All the pending Claims are respectfully shown novel and non-obvious over Venema alone, and non-obvious in combination with additional references, as none teach or suggest that the transverse force sensor located within the span of the coupling chain, as recited by the Claims.

Applicant recognizes the deficiencies of the prior art, as disclosed in Venema, as discussed in the *Specification* (US Patent Publication 20070099735, ¶¶ [0008-0011]). For example, the transverse force sensor of Venema is not located within the span of the coupling chain as currently claimed. Rather than having one sensor that contacts both chain halves at their inner side, Venema has two sensors arranged outside the chain, each sensor contacting a respective chain half at its outer side. Claims 2, 21 and 26 have been further clarified to recite that the sensor contacts both chain halves at their inner side, which is fully supported by the originally-filed *Specification* and Drawings. These patentable distinctions are novel and non-obvious over Venema.

The Application discloses some disadvantages of the Venema-type arrangement, for example, that each sensor is always loaded with the full chain tension force, even when the cyclist is not exerting any pedal force, (US Patent Publication 20070099735, ¶¶ [0008-0011]), while in the case of the present invention, the sensor is only loaded with the force difference, which can be zero in rest.

It is thus respectfully submitted that the pending Claims are novel and non-obvious over the cited art. The Claims are further patentable over Venema and the other cited art, for the following reasons.

For example, while the illustrating figure of Searle is similar to a figure illustrating the present invention, the operation of the device of Searle is quite different, and patentably distinct. According to Searle, the idler wheel C is movable and operates a switch, which in turn actuates a motor. Thus, the output action is only ON or OFF. Further, in order to be able to operate a switch in a reliable manner, the stroke of the idler wheel (i.e. the displacement distance) must be relatively large, causing a change in the shape of the chain, as clearly shown in **Fig. 1**, and thus disturbing the balance of the chain.

In contrast, the present invention as recited in, for example, Claim 21 and those ultimately dependent therefrom, provides an electrical output signal proportional to the force difference between upper chain half and lower chain half, allowing a controller to operate a motor such as to give propulsion force proportional to the chain force, or allowing a trainer to calculate the power generated by the user. By using strain gauges measuring the bending of a supporting arm supporting the measuring wheel, the displacement distance of the measuring wheel can actually be very small, i.e. 0.1 mm or even less, in contrast to the displacement distance of the idler wheel C of Searle, which will be on the order of about 10 mm.

It is thus respectfully submitted that the pending Claims are novel and non-obvious over Searle alone, and in combination with the other cited art.

It is respectfully submitted that both Suolahti and Augrende et al. are non-analogous art, but nonetheless, cannot be combined with Venema to find the Claims obvious in view of the deficiencies in Venema that are not cured by Suolahti or Augrende et al. Nonetheless, Suolahti does not suggest to one of skill in the art that a bending sensor can be applied to the Venema apparatus. Augrende et al. does not suggest to one of skill in the art that a force sensor can be applied to the Venema apparatus. Additionally, Augrende et al. does not disclose a rotatable mounted transverse force sensor, as alleged in the *Office Action*, nor a force sensor mounted in any bearing - Augrende et al. just discloses a force sensor mounted under a stationary bearing of a rotating axle.

It is thus respectfully submitted that the pending Claims are novel and non-obvious over Suolahti and Augrende et al. alone, and in combination with the other cited art.

Todd does not suggest to one of skill in the art that a damper could advantageously be used in a transverse force sensor. It is thus respectfully submitted that the pending Claims are novel and non-obvious over Todd alone, and in combination with the other cited art.

4. Fees

This *Response and Amendment* is being filed within six months of the *Office Action*, and more specifically within three months. Thus, no extension of time fee payment is believed due.

Claim fees for four Claims are believed due, as the pending total claim count has

increased by four additional Claims herein. Authorization is hereby expressly given to charge the additional Claims fees to deposit account No. 20-1507.

Authorization is hereby expressly given to charge any additional fees due to deposit account No. 20-1507.

CONCLUSION

By the present *Response and Amendment*, this Application has been placed in full condition for allowance. Accordingly, Applicant respectfully requests early and favorable action. Should the Examiner have any further questions or reservations, the Examiner is invited to telephone the undersigned Attorney at 404.885.2773.

Respectfully submitted,

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